

NOVITATES ANTILLANAE. VI (1)

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The accumulation of critical specimens collected in the field in the Dominican Republic has led to the study of the recently made collections, with the help of the large herbaria and libraries. While spending some time at the New York Botanical Garden, I had the opportunity to study several of these specimens, and among them were some species unknown to science, and also some new records for the island of Hispaniola. This paper deals with most of the critical material, but there are still a few undescribed plants that need further study, and it is my hope that this can be done in the future. This series of papers is in direct preparation to the writing of a Flora of Hispaniola, which will probably begin soon. Some field work is still needed to complete collections, especially in several places that were little collected to the present.

GRAMINEAE

LEPTOTHRIUM RIGIDUM Kunth, Rev. Gram. 1: 156. 1829.

Dominican Republic: along the beach, S-E of Cabo Rojo, Pedernales, Alain Liogier 13897 (NY).

This collection agrees perfectly with the Jamaican plants at the New York Botanical Garden. First record for Hispaniola.

ORCHIDACEAE

BASIPHYLLAEA ANGUSTIFOLIA Schltr., Fedde, Rep. Spec. Nov.  
21: 338. 1925.

Dominican Republic: On lateritic soil, Loma Peguera, Bonao, alt. 300-400 m, Alain Liogier 17356 (NY).

BASIPHYLLAEA SARCOPHYLLA (Rchb.f.) Schltr. Fedde, Rep. Spec.  
Nov. 17: 78. 1921.

Dominican Republic: Monte Negro, from Sánchez to Las Terreras, Samaná Peninsula, alt 300-400 m, Alain Liogier 14459 (NY), det. L. Garay.

The genus Basiphyllaea Schlcht. comprises few species from the West Indies and Florida. Our two new records were previously known only from Cuba, to which both were considered endemics; B. angustifolia has also been reported from Puerto Rico by D. Dod, though I have seen no specimens.

PSEUDOCENTRUM MINUS Benth. in Hook. Ic, Pl. 14. 64, t.1382.  
1882.

Dominican Republic: In woods, on slopes, Sierra de Neiba Hondo Valle, alt 1000 m, Alain H. Liogier 17805 (NY), collected by Donald Dod.

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Another new record for Hispaniola; the plant was previously known from Jamaica.

LEGUMINOSAE-PAPILIONOIDEAE.

MACROPTILIUM ATROPURPUREUM (DC.) Urb., Symb. Ant. 9: 457. 1928.  
Phaseolus atropurpureus DC. Prodr. 2: 395. 1825.

Dominican Republic: On roadside, Sabaneta de Yásica, Puerto Plata, about sea level, Alain Liogier 17874 (NY).

This plant is introduced into the Dominican Republic as a forage plant, and has become an escape in some places. The local name is KUDZU, and it has been introduced as SIRATRO.

MALPIGHIACEAE.

STIGMAPHYLLON MICROPHYLLUM Griseb. Mem. Am. Acad. n.s. 8: 168. 1860.

Dominican Republic: In thickets, near Sabana Buey, Baní, alt 150 m, Alain Liogier 18094. (NY).

A new record for Hispaniola. This species is distinguished by its small membranous leaves, and by the dilated tip of the posterior styles.

EUPHORBIACEAE.

EUPHORBIA LANCIFOLIA Schlecht. Linnaea 7: 143. 1832.

Dominican Republic: Among coffee plantations, Jamao, Moca, Alain Liogier 18276 (NY).

This Central American plant is probably introduced as a weed with the coffee seeds. I had the opportunity to report the same introduction in the mountains of Western Cuba in Flora de Cuba 3: 131. 1953.

VITACEAE.

CISSUS GRISEBACHII Planch. in DC. Mon. Phan. 5: 541. 1887.

Dominican Republic: In cloud forest, Alto Casabito, Bonao, alt. 1000 m, Alain Liogier 17483 (NY).

This new record for Hispaniola matches the Cuban specimens in the Herbarium. The stems are strongly verrucose, the leaves rhombic-obovate, the inflorescence densely pubescent.

THEACEAE

TERNSTROEMIA GLANDULOSA Alain, sp. nov.

Frutex 2.5-3 m altus; rami cortice griseo ad apicem bene foliati; petioli usque 2 mm longi, 1.5 mm crassi; folia elliptica vel obovata, 2-3.5 cm longa, 1.5-2.2 cm lata, apice rotundata vel emarginata, basi acuta in petiolum angustata, margine recurvo glandulis nigris punctata, nervo medio supra obsolete vel vix impresso, subtus prominulo ad basim crassiore, nervis lateralibus utroque nullis, brunnea, subtus pallidiora,

laevia. Flores solitarii, pedunculi 2.5-3 cm longi, gracili; bracteolae late ovatae 2 mm longae et latae, apice mucronatae, margine glandulosae dorse carinatae, sepala coriacea, exteriora ovata 5 mm longa apice acuta basi sub-auriculata margine glandulosa, sepala interiora ovata 5 mm longa, apice acutiuscula, margine e glandulosa, omnia mucronulata; petala flava, acuta, 3 mm longa, 3 mm lata basi connata; stamina numerosa basi corollae adnata, filamenta breviter incrassata, antherae subulatae 1.5 mm longae; styli 2 usque ad basin liberi, oblongi, 1 mm longi 0.6 mm lati, apice rotundati; ovarium 2-loculare. Fructus ignotus.

Dominican Republic: On limestone rocks, Hoyo de Pelempito, Pedernales, alt 1100 m, 26 Feb 1971, Alain H. Liogier 17923 (Typus: NY); id. Alain Liogier 13873 (NY).

By its conspicuous glands on the leaf margins, this species should be placed near T. nashii Urb., which has long bracteoles; the inner sepals in T. glandulosa lack the glands. Another closely related species is T. selleana Em. & Schm., with very small calyx lobes (2-2.5 mm long), and very short bracteoles (1.5 mm long), which are not keeled.

#### MYRTACEAE

EUGENIA CHACUEYANA Alain, sp. nov.

Frutex 3-4 m altus, rami hornotini plus minus compressi pilosuli, vetustiores grisei cortice fissis; petioli 1-2 mm longi glabri supra leviter sulcati; folia elliptica vel ovato-elliptica, 1-2 cm longa 6-12 mm lata, apice obtusa vel acuta et breviter acuminata, basi obtusa vel rotundata, vel subemarginata, nervo medio supra impresso, subtus prominente, lateralibus utrinque nullis, punctis glandulosis supra nullis, subtus prominulis, margine paullo incrassato recurvo subcoriacea. Pedunculi axillares 6-10 mm longi, bracteolae minutae, ovatae 0.6 mm longae; calycis lobi 4, concavi, inaequales, orbiculares, majores 1 mm longi et lati, minores 0.7 mm longi et lati, margine minute ciliati; petala alba, oblonga, glandulosa 2 mm longa, 1.2 mm lata; fructus non visus.

Dominican Republic: Along a stream at the base of Cerro de Chacuey, Partido, Dajabón, alt 150 m, 22 Oct 1969, Alain H. Liogier 16462 (Typus: NY).

This species is similar to E. formonensis Urb., which has leaves with a crenulated margin, and glandular dots above, the peduncle much shorter; the larger calyx lobes ovate, 2 mm long, the smaller lobes triangular, 1.5 mm long, not concave.

## EUGENIA PUBICALYX Alain, sp. nov.

Frutex parvus 75 cm altus; ramuli compressi pilosuli; petioli teretes 2 mm longi brunnei; folia ovato-lanceolata, apice acuminata basi cordata, 4-5.5 cm longa, 1-3 cm lata, nervo medio supra valde impresso, subtus prominente, lateralibus supra obsoletis vel utroque latere 6-8 prominulis et reticulato-conjunctis; subtus bene prominulis et venis reticulatis conjunctis, glandulis supra nullis subtus sparsis brunneis, margine paullo recurva, glabra, subtus pallidiora. Flores in axillis glomerati, pedicelli 1.5 mm longi, pubescentes, bracteolae triangulares 0.5 mm longae; calycis tubus campanulatus 1.7 mm longus ad apicem 1.5 mm latus, dense puberulus, lobi 4 ovato-orbiculati, 3 mm longi glandulosi glabri margine parce ciliati; petala alba oblongo-obovata, 3.5 mm longa, glandulosa; caetera ignota.

Dominican Republic: In thickets on hillside, in serpentine barrens, Barrancón, Bonao, alt 200-300 m, 17 Apr 1969, Alain H. Liogier 14836 (Typus: NY).

I have found no similar species in the Caribbean; the peculiar leaf-shape, the pubescent calyx are the most distinguishing characteristics.

## EUGENIA YUNANA Alain, sp. nov.

Frutex 2.5 m altus gemmas parce pilosellae, caeterum glaber; rami hornotini plus minus compressi glandulosi; petioli usque 2.2 mm longi supra canaliculati, folia elliptica vel obovato-elliptica 3-6 cm longa, 2-4.2 cm lata, apice rotundata vel leviter emarginata, basi obtusa vel rotundata, nervo medio supra praesertim ad basim impresso, apice evanescente, lateralibus numerosis parallelis et reticulato-anastomosantibus, supra prominulis subtus prominentibus, punctis glandulosis supra paullo impressis subtus obscuris prominulis, margine integra leviter recurva, coriacea. Flores pauci terminales; pedunculi 5 mm longi, compressi; pedicelli subnulli vel usque 3 mm longi, compressi; bracteolae minutae triangulares usque 0.5 mm longae; calycis tubus semisphaericus, pilosus, 1 mm longus et latus, lobi 4 late semiorbiculares 1 mm longi 1 mm lati, minute ciliati, glanduloso-punctati; petala alba obovata 7 mm longa 5 mm lata, glandulosa; stamina numerosa, exserta, stylus 4.5 mm longus, fructus oblongus, 7-8 mm longus, 6 mm latus, dense glandulosus, 2-ocularis, semina pauca.

Dominican Republic: In woods between Boca de Yuma and Cabo Falso, at sea level, 22 Aug 1968, Alain H. Liogier 12280 (Typus: NY).

This plant has little resemblance to any other species of *Eugenia* in the West Indies; its sessile inflorescence, its elliptic coriaceous leaves, with numerous nearly parallel nerves are the most outstanding characteristics.

*HOTTEA NEIBENSIS* Alain, sp. nov.

Frutex 1.5 m altus, rami hornotini plus minus compressi minutissime pilosuli, petioli 1.5 mm longi; folia elliptica vel ovato-elliptica apice versus angustata, apice ipso rotundata, basi acuta vel obtusa, 1.2-1.7 cm longa, 0.7-1.2 cm lata, nervo medio supra leviter impresso, subtus prominente, lateralibus utroque latere 6-8, utrinque prominulis, 0.5-1 mm ante marginem conjunctis frequenter anastomosantibus, margine plana, punctis glandulosis saepe pellucidis supra non conspicuis subtus prominulis, glabra subcoriacea; pedicelli axillares filiformi 3-5 mm longi, bracteae non visae bracteolae triangulares acutae 0.6-0.7 mm longae; alabastra obovato-globosa glandulosa breviter apiculata; calyx in alabastra clausus deinde in lobulos 2 adaperiens, tubus turbinatus 1 mm longus lobi inaequales 3 mm longi; petala (unicum visum) elliptica 5 mm longa; stamina numerosa. Bacca (in paratypo A.H. Liogier 14623) globosa 1.5 cm longa, 1.3 mm lata.

Dominican Republic: In rain forest, Sierra de Neiba, near Hondo Valle, alt 1750-1850 m, 5-7 Sept 1968, Alain H. Liogier 12523 (Typus: NY); 31 March 1969, Alain H. Liogier, J. J. Jimenez & J. Marcano 14623, 14628 (NY).

The genus *Hottea* was described by Urban, one of its main characteristics being the calyx closed in bud, opening by two valves at anthesis.

Its position, according to Rogers McVaugh is not altogether clear, and perhaps this species could help clarify the generic concept. It includes seven species, counting the present one. All are very rare and were collected only once or twice.

The nearest taxon is undoubtedly *H. malangensis* (Urb. & Ekman) Urb., whose leaves are ovate to ovate-orbicular, rounded at the apex; the berry is obliquely oval, only 8 mm wide.

*PSIDIUM GRACILIPES* Alain, sp. nov.

Frutex 3-5 m altus, glaber, rami hornotini paullo compressi brunnei; petioli 2 mm longi supra canaliculati; folia obovata apice rotundata basi cuneata vel obtusa, 1-1.6 cm longa, 8-11 mm lata, nervo medio supra ad basim leviter impresso, ad apicem evanescente, subtus praesertim ad basim prominulo, lateralibus nullis, margine paullo incrassata, glandulis supra obsoletis subtus crebris prominulis obsita, supra nitida, subtus opaca,

chartacea. Flores in axillis solitarii, pedicelli gracili, 1.3-2.3 cm longi, bracteolae non visae; flores non visi; fructus oblongus 5-6 mm longus, 4 mm diam dense glandulosus; calycis lobi 4, oblongi 1.2 mm longi intus glabri; loculi 4, semina numerosa subtriangularia.

Dominican Republic: In cloud forest, Loma Redonda, Ciénaga de la Culata, Constanza, alt 1700-2000 m, 30 Nov 1969, Alain H. Liogier 17138 (Typus: NY).

This species is characterized both by its small leaves and by its slender peduncle; the nearest species in Hispaniola seems to be P. trilobum Urb. & Ekm.; this species has ovate to ovate-rounded leaves, and a much shorter (3-6 mm long) peduncle.

PSIDIUM NANNOPHYLLUM Alain, sp. nov.

Frutex usque 1 m altus procumbens vel erectus, rami hornotini 4-angulati glabri, sparse glandulosi; petioli usque 1 mm longi supra applanata; folia elliptica vel rhanbo-elliptica, apice obtusa vel breviter cuspidata, basi rotundata, 4-6 mm longa et lata, nervo medio supra basi ipsa leviter impresso, caetera obsoleto, subtus per totam longitudinem prominulo, lateralibus non obviis, margine paullo incrassata glabra, punctis glandulosis supra parvis subtus crebris, supra nitida subtus opaca, plus minus coriacea. Pedunculi terminales vel axillares solitarii usque 3 mm longi; bracteolae lanceolatae recurvae 0.8 mm longae; alabastra obovoidea 4 mm longa breviter cuspidata omnino clausa; calycis tubus campanulatus, lobi 4 inaequales, intus puberulenti, petala alba ovato-orbiculata 4-5 mm longa intus ad basim pilosula; stamina numerosa; ovarium 2-3-loculare; fructus globosus, 7-8 mm diam, laevis; semina pauca.

Dominican Republic: In pine barrens, Loma Peguera, Bona, alt 300-400 m, on laterite, 8 Aug 1970, Alain H. Liogier 17378 (Typus: NY).

This stands out among the small-leaved Psidium in having 4-angled branchlets, sessile slightly cuspidate leaves, 1-flowered inflorescence and small fruits.

PSIDIUM SESSILIFOLIUM Alain, sp. nov.

Frutex vel arbor parva, usque 5 m alta; rami hornotini compressi glandulosi, vetustiores grisei; folia sessilia vel subsessilia orbicularia subreniformia 4-4.5 cm longa, apice rotundata, subtruncata vel submarginata, basi cordata, vel subcordata, nervo medio supra ad basim prominente ad apicem evanescente subtus ad basim prominente, lateralibus utroque latere



4-6, 2 mm e margine conjunctis, supra et subtus prominulis, utrinque dense glanduloso-punctata glabra, chartacea, margine plana vel leviter recurva. Inflorescentiae terminales vel axillares, cymosae, pauciflorae; pedunculi usque 4 mm longi, pedicelli 1.2-2 cm longi, ad apicem bracteis 2 linearibus 1.6 mm longis muniti, alabastra pyriformia 6-8 mm longa, antice in juventute aperta; calycis tubus glandulosus, lobi 4, in alabastro latissime rotundati; petala non plane visa. Fructus (in paratypo A. Liogier 16145) globulosus 8 mm diam, calycis lobis coronatus, lobis suborbicularibus 8 mm longis et latis margine excepto glabris; loculi 2, semina 1 vel pauca.

Dominican Republic: On serpentine hill, Arroyo Francés, Puerto Plata, alt 50-100 m, 28-29 Oct 1969, Alain H. Liogier 16557 (Typus: NY); 28 Sept 1969, Alain H. Liogier 16145 (NY); in thickets, along Río de las Caritas, Partido, Dajabón, alt. 120 m, on lateritic soil, 22 Oct 1969, Alain H. Liogier 16473 (NY); in thickets along Maguaca river, Partido, Dajabón, Aug 28, 1971, Alain H. Liogier 17385(NY). Similar to the preceding, but barren and somewhat different in having larger leaves Alain H. Liogier 15877 (NY), from about 4 miles South of La Vega, on serpentine in pine barrens, alt 200-300 m.

There are few species of Psidium with orbicular leaves!

P. amplexicaule Pers., from Puerto Rico and the Lesser Antilles is probably the nearest species; it has orbicular to ovate-orbicular leaves, 4-7 cm long, up to 5 cm wide, with 5-8 pairs of nerves, the glands are not conspicuous on the surface; the flower buds are closed and cuspidate, the bracts are triangular and 1 mm long, the fruit is 2 cm in diam. P. harrisianum Urb. from Jamaica has also larger leaves, the bracts are much smaller, the buds are closed and much smaller than in P. sessilifolium. P. orbifolium Urb. from Cuba has the smallest leaves (3.5 cm in diam), the petiole is well developed (5-6 mm long); unfortunately, the flowers and fruits of this last species are not known.

#### APOCYNACEAE

ASKETANTHERA OBTUSIFOLIA Alain, sp. nov.

Frutex volubilis 4-5 m longus, rami brunnei glabri; novelli sparse patenti-vilosi; petioli usque 1 cm longi supra canaliculati glabri; folia elliptica, 4-6 cm longa, 2-3.6 cm lata, apice rotundata vel latissime obtusata, basi obtusa ad acuta, nervo medio supra impresso subtus prominente, lateralibus utroque latere 5-6, ad marginem curvatis, supra leviter impressis, subtus prominulis, venis supra obsolete, subtus reticulato-conjunctis, lamina glabra, supra viridia subtus pallidiora, margine integra, membranacea. Inflorescentiae pauciflorae, axillares, pedunculi usque 3 cm longi; bractee oblongo-lanceolatae usque 12 mm longae, 4 mm latae; pedicelli usque 2.5 cm longi; calycis lobi subulati 12 mm longi basi 1.5 mm lati, intus ad basim squamu-

las lineares apice truncatis inter sepala gerentes; corolla non visa; follicula (in statu juvenili tantum visa) linearia 4.5 cm longa, 1.5-2 mm lata.

Dominican Republic: In thickets, Hoyo de Pelempito, Baoruco Mts., alt 700 m, 3-8 July 1971, Alain H. Liogier 18124 (Typus NY).

This species stands among the other Hispaniolan species by its smaller measurements; the other species are: Asketanthera dolichopetala (Urb.) Woods., A. picardae (Urb.) Woods. and A. ekmaniana Woods. (= Echites longiflora Ekm. & Helw., 1929, not Desf., 1819). The following key will help to recognize the four species in Hispaniola:

- a. Leaves rounded to wide obtuse, 4-6 cm long, glabrous; calyx-lobes linear-subulate, 10-12 mm long, 1.5 mm wide at base.
  - A. obtusifolia.
- a. Leaves acuminate, 6-15 cm long, pilose or setulose; calyx lobes mostly longer, 4-8 mm wide at base.
  - b. Corolla 2-5 cm long; inflorescence 8-20-flowered.
    - c. Corolla 2-2.5 cm long, the tube somewhat shorter than the calyx-lobes, essentially glabrous externally.
      - A. picardae.
    - c. Corolla 4-5 cm long, the tube conspicuously longer than the calyx-lobes, hispidulous externally.
      - A. dolichopetala.
  - b. Corolla 13-16 cm long; inflorescence 2-8-flowered.
    - A. ekmaniana.

#### BORAGINACEAE.

TOURNEFORTIA PARVIFOLIA Alain, sp. nov.

Volubilis; rami pilis minutis plus minus adpressis obsiti, teretes brunescens; petioli usque 1 mm longi; foliorum lamina ovata vel elliptica 8-12 mm longa, 4-6 mm lata, apice obtusa vel rotundata, basi rotundata vel subcordata, nervo medio supra impresso subtus prominente, lateralibus nullis, margine recurva, supra laevia, minutissime foveolata, foveolae albae, subtus adpresse sericea alba. Inflorescentiae bis vel ter dichotomae ramis usque 1 cm longis brevissime pilosis, 6-10-floris; flores sessiles viriduli; calycis tubus 0.3 mm longus, lobi oblongi 2 mm longi, obtusi; corollae tubus cylindraceus 1 mm longus adpresse pilosus, lobi anguste lineares 0.6 mm longi; stamina tubo corollino ad medium affixa, filamenta subnulla, antherae triangulari-lanceolatae 0.2 mm longae; fructus albi 4-carpidiati glabri 2 mm diametro.

Dominican Republic: In serpentine barrens, Loma Peguera, Bonao, alt 250 m, 17 Oct 1970, Alain H. Liogier 17608 (Typus:



NY).

This plant is distinguished from T. suffruticosa L. and T. stenophylla Urb. by its short ovate or elliptic leaves, while all other species in the Caribbean have larger and lanceolate to linear leaves; its flowers are smaller than any other species, those of T. volubilis L. being about 4 mm long.

#### LABIATAE.

SALVIA DECUMBENS Alain, sp. nov.

Frutex sarmentosus decumbens, 1.5 m longus; rami juniores teretes pilis minutis multiradiatis albidis obtekti; petioli 1.5-2.5 mm longi, folia ovata vel deltoidea vel elliptica, 5-9 mm longa, 3-7 mm lata, basi rotundata vel truncata, nervo medio supra in sulco prominulo, subtus prominulo, lateralibus utroque latere 2 supra leviter impressis, subtus prominulis, vel omnino nullis, margine integra plana vel paullo recurvata, supra pallide viridia pilis multiradiatis obtecta cum glandulis obscuris intermixta, subtus albida dense pilis multiradiatis flocculosa, glandulis intermixta, chartacea. Inflorescentiae terminales pauciflorae, flores 2-7 patenti pilosi; pedunculi nulli; pedicelli usque 3 mm longi; bracteae oblongae 1 mm longae, deciduae; calyx turbinato-campanulatus 10-12 mm longus pilis glanduliferis patentibus obsitus, postice caeruleus; tubus 13-nervis, labia subaequalia 2.5 mm longa, posticum ovatum 5-nervium, apice acutum, antice profunde bilobum lobis triangularibus sub-cuspidatis 3-nervis; corolla caerulea inferne glabra subtus breviter pilosa 17 mm longa, tubus cylindraceus, antice ventricosus, labium posticum oblongum emarginatum, lateralibus rotundatis; stamina sub ore corollae affixa, filamenta 3 mm longa; stylus 13 mm longus sub apice barbatus, bifidus, ramulo posteriore 2 mm longo, anteriore 1 mm longo. uculae ellipsoideae, pallide brunneae, lineis brunneis obscuris laxe reticulatae, 2.2 mm longae, 1.4 mm latae.

Dominican Republic : On limestone rocks, Hoyo de Pelempito, Baoruco Mts., alt 1000 m, 26 Feb 1971, Alain H. Liogier 17932 (Typus: NY).

By its indument, its sarmentose habit, its flower structure, this species belongs to Epling's section Flocculosae. This section is found on the mainland from Mexico to the Andes; there are already two species described from Hispaniola, both from Haiti; S. incumbens Urb. & Ekm. has stellate hairs, the indument is not white or whitish, the corolla has a different shape, the midlobe of the anterior lip being semiorbicular. S. cognata Urb. & Ekm. is a low shrub, with larger leaves (1-2 cm long),

the calyx is 6-7 mm long, the corolla 14 mm long.

### SOLANACEAE

CESTRUM ACUTIFOLIUM Alain, sp. nov.

Frutex 1 m altus, rami pauci cortice brunneo, ramuli dense pilis ramosis obsiti. Petioli 3-6 mm longi, supra canaliculati dense ramoso-pilosi; folia anguste elliptica, apice acuta vel breviter acuminata, basi versus aliquantum angustata, basi ipsa rotundata, 3-9 cm longa, 0.8-3.5 cm lata, nervo medio supra impresso subtus prominente, lateralibus utroque latere 4-6, ad marginem apice versus curvatis, supra impressis, subtus prominentibus, venis paucis, lamina chartacea, supra glabra vel pilis ramosis praesertim ad nervum medium sparse obsita, subtus ad nervos ramoso-pilosa, supra viridia subtus pallida. Inflorescentiae axillares, dense pilis ramosis obsitae, pedunculi usque 2 cm longi; folia floralia minuta usque 1 cm longa et 3 mm lata; superiora linearia usque 6 mm longa; calycis tubus 5 mm longus, 4-5 mm latus, basi acutiusculus, lobi 5, lineari-subulati, usque 7 mm longi, intus glabrescentes; bacca (non omnino evoluta) globosa, olivacea, 4 mm diam.

Dominican Republic: In cloud forest, La Nevera, Valle Nuevo alt 2100 m, 3-5 Apr 1971, Alain H. Liogier 17992 (Typus: NY); id., A. H. Liogier 15491, 18026, 13149.

This plant belongs to the same group as Cestrum virgaurea Urb. & Ekman, from Haiti, having developed calyx-lobes; it differs by the long linear-subulate calyx-lobes, while C. virgaurea has short triangular lobes; the calyx itself is glabrous in this last species; the petiole is longer, the nerves of the leaf are slightly or not at all impressed in C. virgaurea. This last species has been collected only once in Haiti by Ekman.

CESTRUM ACUTIFOLIUM var. GLABRIUS Alain, var. nov.

A var. acutifolium differt: folia apice rotundata vel breve cuspidata, calyx subglaber.

Dominican Republic: In dense forest, La Descubierta, Constanza, alt 1300-1400 m, 1-2 May 1971, Alain H. Liogier 18026 (Typus: NY).

### BIGNONIACEAE

TABEBUIA PERFAE Alain, sp. nov.

Frutex 2.5 m altus, ramosus; rami hornotini dense lepidibus albidis ad centrum nigris obsita, rami vetustiores albo-lepidoti; petioli 2 mm longi subtereti, lepidibus brunneis ornati; folis oblonga, 1.2-3 cm longa, 7-14 mm lata, apice rotundata vel obtusissima, basi obtusa vel acuta, nervo medio supra impresso

subtus prominente, lateralibus utroque latere 5-7, arcuatis et sub margine anastomosantibus, supra leviter impressis, subtus prominulis, margine integra, minute lepidota, coriacea. Inflorescentiae terminales 1-2-florae, pedunculi subnulli vel perbrevis, pedicelli 10-12 mm longi, ad apicem 2-bracteati, bractee lineares 1-5 mm longae; calyx in alabastro clausus, in anthesi usque ad medium bilabiatus, 5 mm longus, lobus anticus breviter 2-, posticus 3-lobulatus; corolla albo-rosea, usque 2.3 cm longa, extus glabra, intus pilosa, tubus infundibuliformis ad apicem 8 mm latus, lobi semi-orbiculares 7-8 mm longi; stylus glaber, 8-10 mm longus. Fructus non visus.

Dominican Republic: On limestone rocks, Catalina Island, at sea level, 2 July 1972, Alain H. Liogier 18669 (Typus: NY); id. Alain H. Liogier 18671 (NY).

The second specimen, A.H. Liogier 18671 has larger leaves, up to 5 cm long and 2 cm wide.

This species is near to T. lindahlii Urb. & Ekm., and T. densifolia Urb. T. lindahlii has oval to obovate leaves, the mid-nerve is only slightly impressed or prominulous; the calyx is up to 10 mm long, the corolla is up to 4.5 cm long; T. densifolia has narrowly oblong to oblong-lanceolate leaves, obtuse to acute at the apex, the bracts are at the middle of the peduncle.

This species is named after its discoverer, my wife Perfa.

#### GESNERIACEAE

GESNERIA BONAONANA Alain, sp. nov.

Frutex 2-3 m altus, glaber, rami juniores in sicco obscure brunescens leviter resinosi, vetustiores foliorum delapsorum cicatricibus ornata; petioli 5-10 mm longi supra anguste canaliculati; folia oblongo-elliptica ad elliptico-lanceolata, 2.5-4.5 cm longa, 8-17 mm lata, supra medium latissima, apice obtuse acuminata vel rotundata, basim in petiolo angustata, nervo medio supra leviter sulcato, subtus prominente, lateralibus in novellis subtus utroque latere 4-5, laxe reticulato-conjunctis, supra obsoletibus, margine in 1/2 superiore dentata, inferne integra, plus minus recurva, glabra, novelli subtus rubri. Pedunculi usque 2 cm longi, filiformes; bractee filiformes, supra basim sitae vel nullae, usque 2-3 mm longae; calycis tubus turbinatus valde 5-angulatus, 2.5 mm longus, ad apicem 2 mm latus, lobi filiformes, usque 8 mm longi, basim 0.6-1 mm lati glabri; corolla rubra 17-20 cm longa basi cylindrica in 1/3 superiore ampliata, ore leviter obliqua, 5-lobulata, lobi semi-orbiculares, 1-1.5 mm longi et lati, glabra, stamina ad basim corollae adnata, fila-

menta 1.7 cm exserta, antherae subquadratae per paria cohaerentes; staminodium 4 mm longum apice leviter incrassatum; discus cupuliformis 0.5 mm altus; stylus glaber, 3.5 cm longus ut stamina valde exsertus, stigma peltatus not bilobulatus; capsula globoso-turbinata 5 mm longa et lata, 5-costata, super calycem convexa et brevis pilosa. Semina non visa.

Dominican Republic: On serpentine in thickets, Loma Peguera Bonao, alt 300-400 m, Aug 8, 1970, Alain H. Liogier 17372 (NY).

This is another species belonging to a group of shrubs with relatively small leaves; the nearest species seems to be G. dolichoostyla Urb., which differs from G. bonaoana by the following characters: the young twigs are pulverulent, the leaves are serrate-dentate nearly to the base, the lateral nerves are more numerous and mostly clearly visible, the peduncle is 2-3 cm long, the bracts 1-1.5 mm long and situated above the middle of the peduncle; the corolla is glandular outside, 2-2.5 cm long, the anthers are free, and the style is hairy. G. mormincola Urb. & Skm. has smaller leaves (1.5-2.5 cm x 0.6-1 cm), with the margin mostly entire; the peduncle has 2 bracteoles in the upper half, the calyx-lobes are grooved inside. G. calcicola Alain lacks the bracts on the peduncle, which is 3-3.5 cm long, the calyx tube is 10-costate. G. saratilis Alain has also shorter leaves (1-2.3 cm long), the peduncles are shorter (1 cm), the corolla is 13 mm long, the filaments are not exserted.

GESNERIA SYLVICOLA Alain, sp. nov.

Arbor parva, 6 m alta; ramuli teretes resinam exsudantes, rami vetustiores glabri cortice striati; petioli usque 2 cm longi, 2-3 mm crassi, superne anguste sulcati; folia anguste elliptica ad oblongo-elliptica, apice obtusa vel rotundata, basi cuneata, 10-15 cm longa, 2.5-3.5 cm lata, nervo medio supra impresso, subtus prominente, lateralibus utroque latere 16-18, superne parce, subtus bene prominulis, margine dentata, glabra, chartacea. Pedunculi in axillis foliorum solitarii in anthesi 12 cm longi, apice 2-3-flori; pedicelli 2-5 mm longi, bractee lineares 3-4 mm longae; calycis tubus turbinatus 4 mm longus, apice 4 mm latus, lobi 5 triangulares apice obtusi, 4.5 mm longi; corolla brunnea, 2 cm longa, glabra, ventricosa, lobi triangulares acuti 3 mm longi, basi 3.5 mm lati; caetera ignota.

Dominican Republic: In dense forest, La Descubierta, alt 1300 m, May 1-2, 1971, Alain H. Liogier 18024 (Typus: NY).

In cloud forest, Loma de la Sal, Jarabacoa, alt 1300 m, Alain Liogier 11710 (NY); in cloud forest, Cuatro Alas, La Culata, Cons-

tanza, Alain Liogier 13078 (NY).

A. Liogier 11710 has an old capsule with a peduncle 25 cm long, the pedicels are 5-6 mm long, the capsule is turbinate, not costate, minutely verrucose, 12-14 mm long. The leaves are up to 18 cm long.

G. sylvicola is related to G. odontophylla Urb. & Ekm.; the main differences are: for G. odontophylla the size of the plant, of the leaves (8-12 cm long), the shape of the leaves, obovate to wide-ovate, acuminate at the apex, the lateral nerves in 6-pairs, the peduncles only 1.5 cm long.

Another set of specimens coming from the rain forest at Sierra de Neiba are referred to this species, until it is possible to get good flowering and fruiting specimens. They are: A. Liogier, J. J. Jiménez & E. Marcano 14635 (NY); Jiménez, E. Marcano & A. H. Liogier 5619 (NY); A. H. Liogier 12584 (NY).

#### RUBIACEAE.

CHIONE TETRAMERA Alain, sp. nov.

Arbor usque 10 m alta; rami hornotini minute pilosi, resinam non exsudantes; rami grisei striati; petioli 3-4 mm longi supra canaliculati; folia elliptica vel oblonga, apice rotundata vel leviter cuspidata, basi rotundata vel cuneata, 3.5-4.5 cm longa, 1.7-2.5 cm lata, nervo medio supra impresso subtus prominulo, nervis lateralibus utroque latere 2-3, supra impressis subtus nullis, ad marginem versus evanescentes, supra obscure viridia in sicco pallida, laevia, subtus pallide viridia, margine recurvo. Inflorescentiae terminales vel axillares, cymosae 3-7-florae, flores fragrantae, pedunculi 3-4 mm longi, bracteae lineares 1.5 mm longae; calycis tubus turbيناتus 3 mm longus, lobi 4 semiorbiculares, 1 mm longi et lati; corolla alba 6-7 mm longa, in aestivatione 8 mm lata, lobi 4, orbiculati, 3 mm longi, 4 mm lati, apice rotundati; stamina 4 tubo corollino adnata, exserta, filamenta glabra 5 mm longa. Antherae oblongo-lineares basi usque ad medium fissae 3 mm longae; stylus glaber 6 mm longus, apice bilobatus, lobi oblongi 1 mm longi, 1 mm lati. Fructus ignotus.

Dominican Republic: Along Comate river, Bayaguana, alt 200 m, March 30 1972, Alain H. Liogier 18567 (NY).

The genus Chione DC. has been described as 5-merous. This species being 4-merous, it is necessary to extend the description of the genus. The cymes are usually 3-flowered, though there can be up to 7 flowers in the same inflorescence. Chione tetramera

besides standing out by the number of flower parts, would be near to Ch. cubensis A. Rich. and Ch. impressa Urb. Ch. impressa has much shorter calyx lobes, shorter filaments, the inflorescence is much larger (up to 12 flowers), the leaves are rhombic to lanceolate, the lateral nerves more numerous and impressed above. It is to be noted that Ch. impressa has also 4 calyx lobes; I have not seen the corolla nor the stamens. Urban in his description of the species (Symb. Ant. 9: 532. 1928), does not mention the number of corolla lobes or of stamens, and this implies that their number is five. Ch. cubensis has prominent nerves on the upper surface of the leaves, the peduncles are much longer (1.5-5 cm long), the pedicels 2-10 mm long, the inflorescence is usually many-flowered.

SCOLOSANTHUS SUBSESSILIS Alain, sp. nov.

Frutex 2 m altus, rami juniores tereti pilis brevissimis obsiti, resinam exsudantes, vetustiores brunnei cortice striato, spinis paucis e basi bifurcatis usque 4 mm longis; stipulae in vaginam perbreve annularem 0.5 mm longam connatae, lobi subulati 1 mm longi, petioli usque 1 mm longi supra canaliculati; foliorum lamina elliptica vel obovato-elliptica, 5-7 mm longa, 3-5 mm lata apice rotundata vel obtusissima, basi rotundata vel cuneata, nervo medio supra ad basim in sulco prominulo vel evanescente, vel leviter impresso, subtus ad basim prominente, ad apicem nullo, lateralibus utrinque nullis, margine plana vel paullo revoluta, supra in sicco obscure viridia, subtus pallidiora chartacea. Flores ad ramos laterales breves glomerati subsessili (pedicello usque 0.5 mm longo); calycis tubus oblongus 1 mm longus, lobi 4, ovati vel oblongo-ovati, 0.5 mm longi, minute ciliolati; corolla lutea, 4 mm longa, tubus cylindraceus, apice 1 mm latus, lobi reversi, semi-orbiculares, 1 mm longi apice rotundati vel obtusi; stamina 4 filamenta basi corollae affixa, basi connata, in parte inferiore pilosa; antherae 0.5 mm longae; stylus 5 mm longus, glaber, stigmata oblongata; fructus non visus.

Dominican Republic: In thickets, on hillside, limestone hills Jaiquí Picado, Santiago, alt 300-400 m, 26 May 1969, Alain H. Liogier 15368 (Typus: NY).

Among the small-leaved Scolosanthus, S. subsessilis has one of the smallest corollas. The nearest species are S. wrightianus (Griseb.) C. Wright, with leaves 7-14 mm long, the flowers short-pedicellate, the calyx-lobes deltoid, the anthers 2 mm long, according to Standley; S. versicolor Vahl has apiculate leaves, the



calyx 2-2.5 mm long, the corolla violet or yellowish, 6-7 mm long. From S. densiflorus Urb., it is readily distinguished by its flowers on lateral branches, instead of being on the spines; S. densiflorus has usually larger leaves (up to 3 cm long), the calyx lobes semiorbicular, the corolla lobes almost as long as the tube.

SCOLOSANTHUS VERSICOLOR Vahl, Eclog. 1: 11. 1796.

Dominican Republic: In thickets on slope, Loma Peguera, Bonafo, alt 300-400 m, 8 Aug 1970, Alain H. Liogier 17371 (NY).

This collection represents a new record for Hispaniola. The species is found in Puerto Rico and some of the Virgin Islands.

#### COMPOSITAE.

AGERATUM DOMINGENSE Spreng. Syst. 3: 446. 1826.

This species had been collected in Hispaniola only once, by Bertero, without locality. I have found it again along Comate river near Bayaguana (Alain Liogier 18566); it is very rare in Hispaniola and fairly common in Western Cuba.

FLAVERIA TRINERVA (Spreng.) C. Mohr, U.S. Dept. Agric. Contr. Nat. Herb. 6: 810. 1901.

Dominican Republic: On roadside, between Cabral and Duvergé Alain Liogier 18314.

This weedy plant was collected in Hispaniola for the first time; I reported it also from Puerto Rico, where it appears to be extremely rare in the South West. It is quite common in Cuba; widely distributed from Southern United States to Northern South America.

VERNONIA FUSILLIFLORA Alain, sp. nov.

Frutex 60 cm altus, rami tereti, ramuli dense pilosuli, griseo-brunnei; petioli usque 1 mm longi tereti vel supra laeve canaliculati; folia obovato-oblonga, 5-8 mm longa 3-4 mm lata, basi longe in petiolum angustata, apice rotundata vel obtusa, nervo medio supra apice excento impresso, subtus prominulo, lateralibus supra nullis, subtus utroque latere 1-2, prominulis, margine integra, supra minute et adpresse puberula, vetustiora glabrescentia glandulis luteis minutis munita, subtus dense et adpresse pilosa, pallidiora, chartacea. Capitula solitaria vel in paria, axillaria vel terminales, flores pauci, plerumque 3-4, pedicelli nulli vel 1-2 mm longi; capitula 6 mm longa, involucri bractee 2-3-seriatae, extus parce puberulae, interiores ovato-lanceolatae, acutae, usque 2 mm longae, exteriores ovatae usque 1.5 mm longae, obtusae; pappi setae interiores usque 20-25, usque 4.5

mm longae, antrorse barbatae, albidae, exteriores nullae; corollae purpureae 2.5 mm longae, lobi lineares tubo 1/2 breviores; antherae non visae; achaenia juvenilia vix 1 mm longa, glabrescentia, pallide brunnea.

Dominican Republic: Aceitillar, Baoruco Mts., in pine barrens, alt 1300 m, 26 Feb 1971, Alain H. Liogier 17916 (Typus: NY).

This plant is characteristic of a group of 3 species, with outer pappus bristles lacking or very small; the first one, V. barkeri was described by Ekman, the second I named V. microphylla and this is the third one. All have small leaves, but V. pusilliflora has the smallest. The distinctive characteristics will be found in the following key:

- a. Flowers 12-13 in each head; leaves 1-2.5 cm long, glandular-punctate on both faces. V. barkeri.
- a. Flowers 3-4 in each head; leaves up to 1 cm long, glandular-punctate above only.
  - b. Leaves elliptic to obovate; involucrel bracts in 3-4 series; outer series of pappus bristles present; achenes glandular. V. microphylla.
  - b. Leaves obovate-oblong; involucrel bracts in 2-3 series; outer series of pappus bristles lacking; achenes glabrescent, not glandular. V. pusilliflora.